Predict 2016-2017 NBA MVP Winner

Mason Chen
Milpitas Christian School
San Jose, CA, USA
mason.chen.training@gmail.com

Abstract

Build a statistical model to predict who will win 2016-2017 NBA Most Valuable Player Award. Team has collected three raw data from public Sports domain: (1) player statistics, (2) team win%, and (3) historical MVP winners. Before building the proto model, the player statistics have been standardized to the Z scale in order to remove any mean and standard deviation effect. The "MVP Index" has been derived from combining each player's Z statistics equally as a "Uniform" model. To evaluate the model accuracy, team has derived another "Accuracy Index" of predicting the top five MVP players. The "Uniform" model can predict the top five winners at 47% accuracy. Team has further derived the "Weighted" model by adding the weight factor which was calculated based on the dispersion/separation between the top two MVP winners and the remaining players not in top 5. The "Weighted" model has improved the Accuracy Index to 52%. To further optimize the prediction accuracy, authors have added the "Team Winning" factor. Authors have assessed the team winning factor based on the "Power" model from power= 0, 1, 2, 3, 4, 5, 6 to power= infinity. Based on the Power Model, team can improve the Accuracy Index to 70%.

Keywords
Sports Analytics, Predictive Model, Z Score, Statistics, Regression

Acknowledgements

Dr. Charles Chen

Biography

Mason Chen is currently a student in the Milpitas Christian Middle School. Mason has certified IASSC (International Associate of Six Sigma Certificate) Lean Six Sigma Yellow Belt, Green Belt, and Black Belt Certificates. He has also certified IBM SPSS Statistics Certificate. He also won the 1st Place Award on the Mental Math and Abacus Math contests in the North California Region. Mason Chen is familiar with Six Sigma DMAIC, DMADOV, Lean Production, Minitab, SPSS Statistics, SPSS Modeler CRISP Data Mining, AP Statistics, and JAVA tools. Mason got invited to present his five ASA team statistics projects for 90mins in the local ASQ Statistics and Reliability Group.